

# PRINTER RUSH

(PTO ASSISTANCE)

Balkin

Application : 09/372036

Examiner : Navarro

GAU : 11045

From: T. McGill

Location: (IDC) FMF FDC

Date: 4-13-05

Tracking #: 0051567

Week Date: 12-13-04

DOC CODE	DOC DATE	MISCELLANEOUS
<input type="checkbox"/> 1449		<input type="checkbox"/> Continuing Data
<input type="checkbox"/> IDS		<input type="checkbox"/> Foreign Priority
<input type="checkbox"/> CLM		<input type="checkbox"/> Document Legibility
<input type="checkbox"/> IIFW		<input type="checkbox"/> Fees
<input type="checkbox"/> SRFW		<input checked="" type="checkbox"/> Other
<input type="checkbox"/> DRW		Amdt. APE 8-11-1999
<input type="checkbox"/> OATH		(CLM 8-11-1999)
<input type="checkbox"/> 312		
<input type="checkbox"/> SPEC		

[RUSH] MESSAGE: Amendment Request that attach  
pages 22i-22xxviii be inserted after  
page 22 of specification, but no new  
pages provided. If they are to be  
inserted please provided. Thank you

[XRUSH] RESPONSE: Pl see attached  
22' - 22xxviii  
Sequence Listing  
Thank  
INITIALS:

NOTE: This form will be included as part of the official USPTO record, with the Response document coded as XRUSH.

REV 10/04

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT: SCHUBERT, PETER  
NEUMANN, SIEGFRIED  
PAWELZIK, MARTINA  
LINXWEILER, WINFRIED  
BURGER, CHRISTA  
HOFMANN, GOTTFRIED  
BUBERT, ANDREAS  
GOEBEL, WERNER  
KOHLER, STEFAN

(ii) TITLE OF INVENTION: PROCESSES AND AGENTS FOR DETECTING  
LISTERIAS

(iii) NUMBER OF SEQUENCES: 43

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: MILLEN, WHITE, ZELANO & BRANIGAN, P.C.  
(B) STREET: 2200 CLARENDON BLVD., SUITE 1400  
(C) CITY: ARLINGTON  
(D) STATE: VIRGINIA  
(E) COUNTRY: US  
(F) ZIP: 22201

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy disk  
(B) COMPUTER: IBM PC compatible  
(C) OPERATING SYSTEM: PC-DOS/MS-DOS  
(D) SOFTWARE: PatentIn Release #1.0, Version #1.25

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: US 08/456,670  
(B) FILING DATE: 01-JUN -1995  
(C) CLASSIFICATION:

(vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: US 08/412,227  
(B) FILING DATE: 27-MAR -1995

(vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: US 08/075,248  
(B) FILING DATE: 11-JUN -1993

(vii) PRIOR APPLICATION DATA:

- (A) APPLICATION NUMBER: DE 4239567.4
- (B) FILING DATE: 25-NOV -1992

(vii) PRIOR APPLICATION DATA:

- (A) APPLICATION NUMBER: DE 4219111.4
- (B) FILING DATE: 11-JUN -1992

(viii) ATTORNEY/AGENT INFORMATION:

- (A) NAME: HAMLET-KING, DIANA
- (B) REGISTRATION NUMBER: 33,302
- (C) REFERENCE/DOCKET NUMBER: MERCK 1694D1

(ix) TELECOMMUNICATION INFORMATION:

- (A) TELEPHONE: 703-243- 6333
- (B) TELEFAX: 703-243-6410
- (C) TELEX: 64191

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 54 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: Mackaness

(ix) FEATURE:

- (A) NAME/KEY: misc\_feature
- (B) LOCATION: 1-20
- (D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY BE ABSENT"

(ix) FEATURE:

- (A) NAME/KEY: misc\_feature
- (B) LOCATION: 35-54

(D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY  
BE ABSENT"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

NNNNNNNNNN NNNNNNNNNN AATATGAAAA AAGCNNNNNN NNNNNNNNNN NNNN

54

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 54 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: Mackaness

(ix) FEATURE:

(A) NAME/KEY: misc\_feature

(B) LOCATION: 1-20

(D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY  
BE ABSENT"

(ix) FEATURE:

(A) NAME/KEY: misc\_feature

(B) LOCATION: 35-54

(D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY  
BE ABSENT"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

NNNNNNNNNN NNNNNNNNNN GCTTCGGTCG CGTANNNNNN NNNNNNNNNN NNNN

54

2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 54 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: DNA (genomic)
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM: *Listeria monocytogenes*
  - (B) STRAIN: Mackaness
- (ix) FEATURE:
  - (A) NAME/KEY: misc\_feature
  - (B) LOCATION: 1-20
  - (D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY BE ABSENT"
- (ix) FEATURE:
  - (A) NAME/KEY: misc\_feature
  - (B) LOCATION: 35-54
  - (D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY BE ABSENT"
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

NNNNNNNNNN NNNNNNNNNN ACAGCTGGGA TTGCNNNNNN NNNNNNNNNN NNNN

54

(2) INFORMATION FOR SEQ ID NO:4:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 55 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: DNA (genomic)
- (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: Mackaness

(ix) FEATURE:

(A) NAME/KEY: misc\_feature

(B) LOCATION: 1-20

(D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY  
BE ABSENT"

(ix) FEATURE:

(A) NAME/KEY: misc\_feature

(B) LOCATION: 36-55

(D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY  
BE ABSENT"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

NNNNNNNNNN NNNNNNNNNN ACTGCTAACA CAGCTNNNNN NNNNNNNNNN NNNNN

55

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 55 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: Mackaness

(ix) FEATURE:

(A) NAME/KEY: misc\_feature

(B) LOCATION: 1-20

(D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY  
BE ABSENT"

(ix) FEATURE:

- (A) NAME/KEY: misc\_feature
- (B) LOCATION: 36-55
- (D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY BE ABSENT"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

NNNNNNNNNN NNNNNNNNNN TAACAGCAAT TCAAGNNNNN NNNNNNNNNN NNNNN

55

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 54 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Listeria monocytogenes
- (B) STRAIN: Mackaness

(ix) FEATURE:

- (A) NAME/KEY: misc\_feature
- (B) LOCATION: 1-20
- (D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY BE ABSENT"

(ix) FEATURE:

- (A) NAME/KEY: misc\_feature
- (B) LOCATION: 35-54
- (D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY BE ABSENT"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

NNNNNNNNNN NNNNNNNNNN CTGAGGTAGC GAGCNNNNNN NNNNNNNNNN NNNN

54

2) INFORMATION FOR SEQ ID NO:7:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 56 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: DNA (genomic)
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM: *Listeria monocytogenes*
  - (B) STRAIN: Mackaness
- (ix) FEATURE:
  - (A) NAME/KEY: misc\_feature
  - (B) LOCATION: 1-20
  - (D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY BE ABSENT"
- (ix) FEATURE:
  - (A) NAME/KEY: misc\_feature
  - (B) LOCATION: 37-56
  - (D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY BE ABSENT"
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

NNNNNNNNNN NNNNNNNNNN AGCACTCCAG TTGTTANNNN NNNNNNNNNN NNNNNN

56

(2) INFORMATION FOR SEQ ID NO:8:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 55 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: DNA (genomic)
- (iii) HYPOTHETICAL: NO



(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: Mackaness

(ix) FEATURE:

(A) NAME/KEY: misc\_feature

(B) LOCATION: 1-20

(D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY BE ABSENT"

(ix) FEATURE:

(A) NAME/KEY: misc\_feature

(B) LOCATION: 36-55

(D) OTHER INFORMATION: /note= "SOME OR ALL N NUCLEOTIDES MAY BE ABSENT"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

NNNNNNNNNN NNNNNNNNNN GCAGTTTCTA AACCTNNNNN NNNNNNNNNN NNNNN

55

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: Mackaness

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

ATGAATATGA AAAAAGCAAC

20

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: Mackaness

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

TTGGCTTCGG TCGCGTATAA

20

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: Mackaness

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

GCTACAGCTG GGATTGCGGT

20

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: Mackaness

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

CAAACGCTA ACACAGCTAC T

21

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: Mackaness

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

CAATAACAGC AATTCAAGTG C

21

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: Mackaness

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

TAACTGAGGT AGCGAGCGAA

20

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 22 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: Mackaness

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

ACTAGCACTC CAGTTGTAA AC

22

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: Mackaness

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

CCAGCAGTTT CTAAACCTGC T

21

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: EGD

(ix) FEATURE:

- (A) NAME/KEY: Modified- site
- (B) LOCATION: 1-7
- (D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(ix) FEATURE:

- (A) NAME/KEY: Modified- site
- (B) LOCATION: 14-20
- (D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

```
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Pro Val Ala Pro Thr Gln Xaa Xaa Xaa
1           5           10           15

Xaa Xaa Xaa Xaa
                20
```

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: EGD

(ix) FEATURE:

(A) NAME/KEY: Modified- site

(B) LOCATION: 1-7

(D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(ix) FEATURE:

(A) NAME/KEY: Modified- site

(B) LOCATION: 15-21

(D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

```
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Gln Ala Thr Thr Pro Ala Xaa Xaa
1           5           10           15

Xaa Xaa Xaa Xaa Xaa
                20
```

2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: EGD

(ix) FEATURE:

- (A) NAME/KEY: Modified- site
- (B) LOCATION: 1-7
- (D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(ix) FEATURE:

- (A) NAME/KEY: Modified- site
- (B) LOCATION: 17-23
- (D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Ala	Ile	Lys	Gln	Thr	Ala	Asn	Thr	Ala
1				5					10					15	
Xaa Xaa Xaa Xaa Xaa Xaa Xaa															
20															

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: EGD

(ix) FEATURE:

- (A) NAME/KEY: Modified- site
- (B) LOCATION: 1-7
- (D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(ix) FEATURE:

- (A) NAME/KEY: Modified- site
- (B) LOCATION: 17-23
- (D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Gln	Thr	Ala	Pro	Lys	Ala	Pro	Thr
1				5					10					15	
Xaa Xaa Xaa Xaa Xaa Xaa Xaa															
20															

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: EGD

(ix) FEATURE:

- (A) NAME/KEY: Modified- site
- (B) LOCATION: 1-7
- (D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(ix) FEATURE:

- (A) NAME/KEY: Modified- site
- (B) LOCATION: 20-26
- (D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"



(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Asn Asn Glu Val Ala Ala Ala Glu  
1 5 10 15

Lys Thr Glu Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
20 25

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 23 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: EGD

(ix) FEATURE:

(A) NAME/KEY: Modified- site

(B) LOCATION: 1-7

(D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(ix) FEATURE:

(A) NAME/KEY: Modified- site

(B) LOCATION: 17-23

(D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Pro Val Val Lys Gln Glu Val Lys  
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
20

2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: EGD

(ix) FEATURE:

- (A) NAME/KEY: Modified- site
- (B) LOCATION: 1-7
- (D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(ix) FEATURE:

- (A) NAME/KEY: Modified- site
- (B) LOCATION: 19-25
- (D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Val	Lys	Gln	Pro	Thr	Thr	Gln	Gln	Thr
1				5					10					15	

Ala	Pro	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25

(2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 24 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: EGD

(ix) FEATURE:

- (A) NAME/KEY: Modified- site
- (B) LOCATION: 1-7
- (D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(ix) FEATURE:

- (A) NAME/KEY: Modified- site
- (B) LOCATION: 18-24
- (D) OTHER INFORMATION: /note= "SOME OR ALL Xaa AMINO ACIDS  
MAY BE ABSENT"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Ile	Lys	Gln	Pro	Thr	Lys	Thr	Val	Ala
1				5					10					15	

Pro	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
							20

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 9 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: EGD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

Gln	Gln	Thr	Thr	Thr	Lys	Ala	Pro	Thr
1				5				

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 9 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: EGD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

Val	Ser	Thr	Pro	Val	Ala	Pro	Thr	Gln
1				5				

(2) INFORMATION FOR SEQ ID NO:27:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: EGD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

Thr	Thr	Gln	Ala	Thr	Thr	Pro	Ala	Pro	Lys	Val	Ala
1				5					10		

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: EGD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

Leu	Ala	Ile	Lys	Gln	Thr	Ala	Asn	Thr	Ala	Thr
1				5					10	

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: EGD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

Gln	Gln	Gln	Thr	Ala	Pro	Lys	Ala	Pro	Thr	Glu
1				5					10	

(2) INFORMATION FOR SEQ ID NO:30:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: EGD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

Ser	Thr	Pro	Val	Ala	Pro	Thr	Gln	Glu	Val	Lys	Lys
1				5					10		

2) INFORMATION FOR SEQ ID NO:31:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: EGD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

Pro	Val	Ala	Pro	Thr	Gln	Glu	Val	Lys	Lys
1			5						10

(2) INFORMATION FOR SEQ ID NO:32:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 14 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: EGD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

Gln	Val	Asn	Asn	Glu	Val	Ala	Ala	Ala	Glu	Lys	Thr	Glu	Lys
1			5						10				

(2) INFORMATION FOR SEQ ID NO:33:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: EGD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

Glu	Val	Lys	Gln	Thr	Thr	Gln	Ala	Thr	Thr	Pro	Ala
1				5					10		

(2) INFORMATION FOR SEQ ID NO:34:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: EGD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

Ala	Ile	Lys	Gln	Thr	Ala	Asn	Thr	Ala	Thr	Pro	Lys
1				5					10		

(2) INFORMATION FOR SEQ ID NO:35:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria innocua*

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

Ser	Thr	Pro	Val	Val	Lys	Gln	Glu	Val	Lys	Lys
1				5					10	

(2) INFORMATION FOR SEQ ID NO:36:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 13 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria innocua*

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

Glu	Val	Lys	Gln	Pro	Thr	Thr	Gln	Gln	Thr	Ala	Pro	Ala
1				5					10			

(2) INFORMATION FOR SEQ ID NO:37:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria innocua*

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

Ala	Ile	Lys	Gln	Pro	Thr	Lys	Thr	Val	Ala	Pro	Lys
1				5					10		

(2) INFORMATION FOR SEQ ID NO:38:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria innocua*



(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

Glu Gln Gln Thr Thr Thr Lys Ala Pro Thr Gln  
1 5 10

(2) INFORMATION FOR SEQ ID NO:39:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 232 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: EGD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

Gln Val Asn Asn Glu Val Ala Ala Ala Glu Lys Thr Glu Lys Ser Val  
1 5 10 15

Ser Ala Thr Trp Leu Asn Val Arg Thr Gly Ala Gly Val Asp Asn Ser  
20 25 30

Ile Ile Thr Ser Ile Lys Gly Gly Thr Lys Val Thr Val Glu Thr Thr  
35 40 45

Glu Ser Asn Gly Trp His Lys Ile Thr Tyr Asn Asp Gly Lys Thr Gly  
50 55 60

Phe Val Asn Gly Lys Tyr Leu Thr Asp Lys Ala Val Ser Thr Pro Val  
65 70 75 80

Ala Pro Thr Gln Glu Val Lys Lys Glu Thr Thr Thr Gln Gln Ala Ala  
85 90 95

Pro Val Ala Glu Thr Lys Thr Glu Val Lys Gln Thr Thr Gln Ala Thr  
100 105 110

Thr Pro Ala Pro Lys Val Ala Glu Thr Lys Glu Thr Pro Val Ile Asp  
115 120 125

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Gln Asn Ala Thr Thr His Ala Val Lys Ser Gly Asp Thr Ile Trp Ala  
130 135 140

Leu Ser Val Lys Tyr Gly Val Ser Val Gln Asp Ile Met Ser Trp Asn  
145 150 155 160

Asn Leu Ser Ser Ser Ser Ile Tyr Val Gly Gln Lys Leu Ala Ile Lys  
165 170 175

Gln Thr Ala Asn Thr Ala Thr Pro Lys Ala Glu Val Lys Thr Glu Ala  
180 185 190

Pro Ala Ala Glu Lys Gln Ala Ala Pro Val Val Lys Glu Asn Thr Asn  
195 200 205

Thr Asn Thr Ala Thr Thr Glu Lys Lys Glu Thr Ala Thr Gln Gln Gln  
210 215 220

Thr Ala Pro Lys Ala Pro Thr Glu  
225 230

(2) INFORMATION FOR SEQ ID NO:40:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 478 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: *Listeria monocytogenes*
- (B) STRAIN: EGD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

Met Asn Met Lys Lys Ala Thr Ile Ala Ala Thr Ala Gly Ile Ala Val  
1 5 10 15

Thr Ala Phe Ala Ala Pro Thr Ile Ala Ser Ala Ser Thr Val Val Val  
20 25 30

Glu Ala Gly Asp Thr Leu Trp Gly Ile Ala Gln Ser Lys Gly Thr Thr  
35 40 45

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Val Asp Ala Ile Lys Lys Ala Asn Asn Leu Thr Thr Asp Lys Ile Val  
50 55 60

Pro Gly Gln Lys Leu Gln Val Asn Asn Glu Val Ala Ala Ala Glu Lys  
65 70 75 80

Thr Glu Lys Ser Val Ser Ala Thr Trp Leu Asn Val Arg Thr Gly Ala  
85 90 95

Gly Val Asp Asn Ser Ile Ile Thr Ser Ile Lys Gly Gly Thr Lys Val  
100 105 110

Thr Val Glu Thr Thr Glu Ser Asn Gly Trp His Lys Ile Thr Tyr Asn  
115 120 125

Asp Gly Lys Thr Gly Phe Val Asn Gly Lys Tyr Leu Thr Asp Lys Ala  
130 135 140

Val Ser Thr Pro Val Ala Pro Thr Gln Glu Val Lys Lys Glu Thr Thr  
145 150 155 160

Thr Gln Gln Ala Ala Pro Val Ala Glu Thr Lys Thr Glu Val Lys Gln  
165 170 175

Thr Thr Gln Ala Thr Thr Pro Ala Pro Lys Val Ala Glu Thr Lys Glu  
180 185 190

Thr Pro Val Ile Asp Gln Asn Ala Thr Thr His Ala Val Lys Ser Gly  
195 200 205

Asp Thr Ile Trp Ala Leu Ser Val Lys Tyr Gly Val Ser Val Gln Asp  
210 215 220

Ile Met Ser Trp Asn Asn Leu Ser Ser Ser Ser Ile Tyr Val Gly Gln  
225 230 235 240

Lys Leu Ala Ile Lys Gln Thr Ala Asn Thr Ala Thr Pro Lys Ala Glu  
245 250 255

Val Lys Thr Glu Ala Pro Ala Ala Glu Lys Gln Ala Ala Pro Val Val  
260 265 270

Lys Glu Asn Thr Asn Thr Asn Thr Ala Thr Thr Glu Lys Lys Glu Thr  
275 280 285

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Ala Thr Gln Gln Gln Thr Ala Pro Lys Ala Pro Thr Glu Ala Ala Lys  
290 295 300

Pro Ala Pro Ala Pro Ser Thr Asn Thr Asn Ala Asn Lys Thr Asn Thr  
305 310 315 320

Asn Thr Asn Thr Asn Asn Thr Asn Thr Pro Ser Lys Asn Thr Asn Thr  
325 330 335

Asn Ser Asn Thr Asn Thr Asn Thr Asn Ser Asn Thr Asn Ala Asn Gln  
340 345 350

Gly Ser Ser Asn Asn Asn Ser Asn Ser Ser Ala Ser Ala Ile Ile Ala  
355 360 365

Glu Ala Gln Lys His Leu Gly Lys Ala Tyr Ser Trp Gly Gly Asn Gly  
370 375 380

Pro Thr Thr Phe Asp Cys Ser Gly Tyr Thr Lys Tyr Val Phe Ala Lys  
385 390 395 400

Ala Gly Ile Ser Leu Pro Arg Thr Ser Gly Ala Gln Tyr Ala Ser Thr  
405 410 415

Thr Arg Ile Ser Glu Ser Gln Ala Lys Pro Gly Asp Leu Val Phe Phe  
420 425 430

Asp Tyr Gly Ser Gly Ile Ser His Val Gly Ile Tyr Val Gly Asn Gly  
435 440 445

Gln Met Ile Asn Ala Gln Asp Asn Gly Val Lys Tyr Asp Asn Ile His  
450 455 460

Gly Ser Gly Trp Gly Lys Tyr Leu Val Gly Phe Gly Arg Val  
465 470 475

(2) INFORMATION FOR SEQ ID NO:41:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

Thr Asn Thr Asn Thr Asn Thr Asn Thr Asn Thr Asn  
1                    5                    10

(2) INFORMATION FOR SEQ ID NO:42:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

Cys Gln Gln Gln Thr Ala Pro Lys Ala Pro Thr Glu  
1                    5                    10

(2) INFORMATION FOR SEQ ID NO:43:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: YES

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Listeria monocytogenes*

(B) STRAIN: Mackaness

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

GCACTTGAAT TGCTGTTATT G